

DP-311189

## OPERATING A VEHICLE CONTROL SYSTEM

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### ABSTRACT OF THE INVENTION

The invention provides a method, a computer usable medium including a  
10 program, and a system for operating a vehicle control system. A plurality of measured  
vehicle variables is determined. At least one suspension force is determined based on at  
least one of the determined measured vehicle variables. At least one tire vertical force is  
determined based on the at least one determined suspension force and at least one of the  
determined measured vehicle variables. At least one tire longitudinal force is determined  
15 based on at least one of the determined measured vehicle variables. At least one axle  
lateral force is determined based on at least one of the determined measured vehicle  
variables. At least one tire lateral force is determined based on the at least one  
determined axle lateral force and the at least one determined tire vertical force. At least  
one control component of the vehicle control system is modulated based on the at least  
20 one determined tire vertical force, the at least one determined tire longitudinal force, and  
the at least one determined tire lateral force.